

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/CA2004/001454

## A. CLASSIFICATION OF SUBJECT MATTER

IPC7: B62D-21/15, B21J-5/12, B21D-9/05

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: B62D-21/15, B21J-5/12, B21D-9/05

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base, and, where practicable, search terms used)  
Delphion, Espacenet, Main keywords: frame, vehicle, crash, collision, weaken.

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,406,088 B1 (TATE), 2002-06-18, whole document	1-10
X	US 6,099,071 (KASUGA et al), 2000-08-08, the whole document	1-3; 5, 7, 8
X	US 5,913,565 (WATANABE), 1999-06-22, figure 1, abstract	1, 6, 8
X	JP 06278646 A (NISSAN SHATAI CO LTD), 1994-10-04, representative drawing, abstract	1, 6, 8
X	US 6,293,587 B1 (LAPIC et al), 2001-09-25, figure 5, column 5, lines 10-14	1, 8
X	JP 2001241478 A (NKK CORP), 2001-09-07, representative drawing, abstract	1, 8
A	WO 02/04253 A1 (NORSK HYDRO ASA), 2002-01-17, the whole document	11-15

Further documents are listed in the continuation of Box C.

(x) Patent family members are listed in annex.

* Special categories of cited documents :	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier application or patent but published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

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**INTERNATIONAL SEARCH REPORT**  
Information on patent family members

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PCT/CA2004/001454

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